## DEPARTMENT OF TRANSPORTATION FEDERAL AVIATION ADMINISTRATION

	A7CE
	Revision 45
	CESSNA
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	July 12, 2002

#### TYPE CERTIFICATE DATA SHEET NO. A7CE

This data sheet which is part of Type Certificate No. A7CE prescribes conditions and limitations under which the product for which the type certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder Cessna Aircraft Company

P. O. Box 7704

Wichita, Kansas 67277

### I - Model 411 (Normal Category), Approved August 17, 1964 Model 411A (Normal Category), Approved January 26, 1967

Engines Two Continental GTSIO-520-C, reduction gear ratio .750:1

Fuel Grade 100 or 100LL aviation gasoline

**Engine Limits** For all operations, 2400 propeller r.p.m. (340 hp.)

34.5 in. Hg. Mp. up to critical altitude of 16,000 ft. in standard atmosphere. Above

16,000 ft. the following maximum Mp. applies for maximum r.p.m.

Altitude (ft.)	Max. Allowable Mp. (in. Hg.)
16,000	34.5
18,000	31.2
20,000	29.0
22,000	26.4
24,000	24.3
26,000	22.2
28,000	20.2
30,000	18.5

Propeller and **Propeller Limits**  1. Model 411 only

Two Hartzell full-feathering 3-bladed propeller installations

(a) Hartzell Hub HC-A3VF-2D with V8833 blades Diameter: not over 88.4 in., not under 86.4 in.

(no further reduction permitted)

Pitch settings at 30 in. station:

low 14.0°,  $+0^{\circ}$ ,  $-2^{\circ}$ feathered  $84.0^{\circ}$ ,  $+2^{\circ}$ ,  $-0^{\circ}$ 

- (b) Hydraulic Governor Woodward A210444, 210439, C210446 or B210529
- (c) Propeller spinner and bulkhead assembly, Hartzell 835-20

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Propeller and Propeller Limits

#### or 2. Models 411 and 411A

Two McCauley full-feathered 3-bladed propeller installations

(a) McCauley hub 3AF34C74 with 90LF-0 blades or McCauley hub 3AF37C510 with 90LFB blades Diameter: not over 90 in., not under 84.0 in. with

 $90LF\hbox{--}0$  blades or not under 88.0 in. with  $90LFB\hbox{--}0$  blades.

(no further reduction permitted) Pitch settings at 30 in. station:

low 14.0°, <u>+</u>0.2° feathering 84.5°, <u>+</u>0.3°

(b) Hydraulic governor Woodward A210444, 210439, C210446 or B210529

(c) Propeller spinner and bulkhead assembly,

McCauley D-3574 or D-3732 for use with C74 Model Propeller, or

McCauley D-7229 for use with C510 Model Propeller.

Airspeed Limits Maneuvering 180 m.p.h. (156 knots) (CAS) Maximum structural cruising 230 m.p.h. (200 knots)

Never exceed 266 m.p.h. (231 knots)
Landing gear operating 160 m.p.h. (139 knots)
Landing gear extended 160 m.p.h. (139 knots)
Flaps extended 15° 180 m.p.h. (156 knots)
Flaps extended 45° 160 m.p.h. (139 knots)
Minimum control 103 m.p.h. (90 knots)

C.G. Range (Landing Gear Extended)

(+150.6) to (+155.5) at 6500 lb. (+155.7) at 6100 lb. or less (+144.3) at 5200 lb. or less

Straight line variation between points given Landing gear retracted moment change: +837 in.-lb.

Empty Wt. C.G. Range

None

Leveling Means External screw heads on right side of fuselage at stations +213.65 and +238.00

on W.L. +93.80

Maximum Weight Landing 6500 lb., takeoff 6500 lb.

No. of Seats 6, 7 or 8 (2 at +137.0, 2 at +175.5, 2 at +215.5, 1 or 2 at +238.0)

(See manufacturer's equipment list for optional seating arrangements)

Maximum Baggage Model 411: 120 lb. (+58.0), 240 lb. (+186.0), 340 lb. (+246.5)

Model 411A: 350 lb. (+71.0), 240 lb. (+186.0), 340 lb. (+246.5)

Fuel Capacity 175 gal. (2 wing tip tanks, 51 gal. ea., 50 gal. usable at

+152.0 and 2 wing tanks, 36.5 gal. ea., 35 gal. usable at +164.0)

See NOTE 1 for data on unusable fuel

Oil Capacity 26 qt. (13 qt. in ea. engine at +115.4; usable 7.0 qt. per engine)

See NOTE 1 for undrainable oil

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#### I - Model 411, Model 411A (cont'd)

Control Surface Movements

Down  $45^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$ Wing flaps Main surfaces Aileron Up  $20^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$  $20^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$ Down Up 25°, +1°, -0° Elevator Down  $15^{\circ}, +1^{\circ}, -0^{\circ}$ Right  $32^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$ Rudder Left  $32^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$ (Read degrees normal to rudder hinge line)

Tab (main surface in neutral)

Up  $20^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$  $20^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$ Aileron Down Up 10°, +1°, -0° Elevator  $26^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$ Down Right  $17^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$ Rudder Left  $22^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$ 

(Read degrees normal to rudder hinge line)

Serial Nos. Eligible Model 411: 411-0001 through 411-0250

Model 411A: 411-0251 through 411-0300

## II - Model 401 (Normal Category), Approved September 20, 1966

Model 401A (Normal Category), Approved October 29, 1968 Model 401B (Normal Category), Approved November 12, 1969

Engines Two Continental TSIO-520-E or TSIO-520-EB (In any combination)

Fuel Grade 100 or 100LL aviation gasoline

**Engine Limits** For all operations, 2700 r.p.m. (300 hp.) 34.5 in. Hg. Mp. up to

critical altitude of 16,000 ft. in standard atmosphere. Above

16,000 ft. the following maximum Mp. applies for maximum r.p.m.

Altitude (ft.)	Max. Allowable Mp. (in. Hg.)
16,000	34.5
18,000	31.8
20,000	29.5
22,000	27.3
24,000	25.1
26,000	23.0
28,000	22.0
30,000	19.0

Propeller and Propeller Limits Two McCauley full-feathered 3-bladed propeller installations

(a) McCauley hub 3AF32C87 with 82NC-5.5 blades or McCauley hub

3AF32C504 with 82NEA-5.5 blades

Diameter: not over 76.5 in., not under 74.0 in.

(no further reduction permitted)

Pitch settings at 30 in. station:

low 14.2°, ±0.2°

feathered  $81.2^{\circ}, \pm 0.3^{\circ}$ 

(b) Model 401: Hydraulic Governor Woodward B210444, C210439, B210446 or A210529F

Model 401A and 401B: Hydraulic Governor Woodward B210444, C210439, B210446, or A210529F; McCauley DCF290D1/T3, DCF290D2/T3, DCF290D7/T3, DCFU290D1/T3, DCFU290D2/T3, DCFU290D7/T3, DCFU290D13/T3, DCFS290D1/T3, DCFS290D2/T3, DCFS290D7/T3, DCFUS290D1/T3, DCFUS290D2/T3, DCFUS290D7/T3, DCFUS290D13/T3.

(c) Propeller spinner and bulkhead assembly, McCauley D-3534/D-3537, D-3534/D-3796, and D-5212/D5214.

Airspeed Limits	Maneuvering	180 m.p.h. (156 knots)
(CAS)	Maximum structural cruising	230 m.p.h. (200 knots)
	Never exceed	266 m.p.h. (231 knots)
	Landing gear operating	160 m.p.h. (139 knots)
	Landing gear extended	160 m.p.h. (139 knots)
	Flaps extended 15°	180 m.p.h. (156 knots)
	Flaps extended 45°	160 m.p.h. (139 knots)
	Minimum control	95 m.p.h. (83 knots)

C.G. Range (Landing (+150.8) to (+158.1) at 6300 lb. Gear Extended) (+158.5) at 5900 lb. or less

(+147.5) at 5000 lb. or less

Straight line variation between points given

Landing gear retracted moment change: +837 in.-lb.

Empty Wt. C.G. Range None

Leveling Means External screw heads on right side of fuselage at stations +213.65 and +238.00 on

W.L. +93.80

Maximum Weight Landing 6200 lb., takeoff 6300 lb.

No. of Seats 6, 7 or 8 (2 at +137.0, 2 at +175.6, 2 at +215.5, 1 or 2 at +238.0)

(See manufacturer's equipment list for optional seating arrangements)

Maximum Baggage 350 lb. (+71.0), 240 lb. (+186.0), 340 lb. (+246.5)

Fuel Capacity 102 gal. (2 wing tip tanks, 51 gal. ea., 50 gal. usable at +152.0)

See NOTE 1 for data on unusable fuel

26 qt. (13 qt. in ea. engine at +113.5; usable 6.5 qt. per engine) Oil Capacity

See NOTE 1 for data on undrainable oil

Control Surface Movements Down  $45^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$ Wing flaps

> Main surfaces Up  $20^{\circ}, +1^{\circ}, -0^{\circ}$ 20°, +1°, -0° Aileron Down Elevator Up  $25^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$ Down  $15^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$ Right  $32^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$ Left  $32^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$ Rudder

(Read degrees normal to rudder hinge line)

Tab (main surface in neutral)

Aileron Up  $20^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$ 20°, +1°, -0° Down Elevator  $5^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$ 30°, +1°, -0° Up Down Rudder Right  $7^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$ Left 9°, +1°, -0°

(Read degrees normal to rudder hinge line)

401-0001 through 401-0322 Serial Nos. Eligible Model 401:

> Model 401A: 401A0001 through 401A0132 Model 401B: 401B0001 through 401B0221

#### III - Model 402 (Normal Category), Approved September 20, 1966

Model 402A (Normal Category), Approved January 3, 1969 Model 402B (Normal Category), Approved November 12, 1969

Engines Two Continental TSIO-520-E or TSIO-520-EB (In any combination)

Fuel Grade 100 or 100LL aviation gasoline Page 5 of 24 A7CE

## III - Model 402, Model 402A, Model 402B (cont'd)

**Engine Limits** 

For all operations, 2700 r.p.m. (300 hp.)

34.5 in. Hg. Mp. up to critical altitude of 16,000 ft. in standard atmosphere. Above 16,000 ft. the following maximum Mp. applies for maximum r.p.m.

Altitude (ft.)	Max. Allowable Mp. (in. Hg.)
16,000	34.5
18,000	31.8
20,000	29.5
22,000	27.3
24,000	25.1
26,000	23.0
28,000	22.0
30,000	19.0

Propeller and Propeller Limits Two McCauley full-feathered 3-bladed propeller installations

(a) McCauley hub 3AF32C87 with 82NC-5.5 blades or McCauley hub

3AF32C504 with 82NEA-5.5 blades

Diameter: not over 76.5 in., not under 74.0 in.

(no further reduction permitted)

Pitch settings at 30 in. station:

low 14.2°, ±0.2°

feathering 81.2°, ±0.3°

(b) Model 402, 402A and 402B, S/N 402B0001 thru 402B1200

Hydraulic governor, Woodward B210444, C210439, B210446F or A210529H; McCauley DCF290D1/T3, DCF290D2/T3, DCFS290D1/T3, DCFS290D2/T3, DCFU290D1/T3, DCFU290D2/T3, DCFUS290D1/T3, DCFUS290D7/T3, DCFUS290D7/T3, DCFUS290D7/T3, DCFUS290D7/T3, DCFUS290D1/T3, DCFUS290D13/T3, DCFUS290D13/T3, DCFUS290D13/T3.

#### Model 402B, S/N 402B1201 through 402B1300

Hydraulic governor, Woodward B210444, C210439; McCauley DCF290D1/T3, DCF290D2/T3, DCFU290D1/T3, DCFU290D2/T3, DCFS290D4/T3, DCFS290D5/T3, DCFS290D5/T3, DCFS290D7/T3, DCFU290D7/T3, DCFS290D7/T3, DCFS290D7/T3, DCFU290D13/T3, DCFU290D13/T3.

#### Model 402B, S/N 402B1301 and up

Hydraulic governor, Woodward B210444, C210439; McCauley DCF290D1/T3, DCF290D2/T3, DCFU290D1/T3, DCFU290D2/T3, DCFS290D4/T3, DCFS290D6/T3, DCFS290D6/T3, DCFS290D7/T3, DCFUS290D7/T3, DCFS290D7/T3, DCFS290D7/T3, DCFS290D7/T3, DCFS290D8/T3, DCFS290D8/T3, DCFS290D12/T3, DCFS290D13/T3.

(c) Propeller spinner and bulkhead assembly, McCauley D-3534/D-3537, D-3534/D-3796, or D-5212/D5214.

## III - Model 402, Model 402A, Model 402B (cont'd)

Airspeed Limits Model 402, S/N 402-0001 and up (CAS) Model 402A, S/N 402A0001 and up

Model 402B, S/N 402B0001 through 402B0500

180 m.p.h. (156 knots) Maneuvering Maximum structural cruising 230 m.p.h. (200 knots) Never exceed 266 m.p.h. (231 knots) Landing gear operating 160 m.p.h. (139 knots) Landing gear extended 160 m.p.h. (139 knots)

Airspeed Limits (Cont.) Flaps extended 15° 180 m.p.h. (156 knots)

(CAS) Flaps extended 45° 160 m.p.h. (139 knots)

Minimum control 95 m.p.h. (83 knots)

Model 402B, S/N 402B0501 through 402B1000

Maneuvering 156 KCAS (180 m.p.h.) Maximum structural cruising 200 KCAS (230 m.p.h.) 231 KCAS (266 m.p.h.) Never exceed Landing gear operating 140 KCAS (161 m.p.h.) 140 KCAS (161 m.p.h.) Landing gear extended 160 KCAS (184 m.p.h.) Flaps extended 15° Flaps extended 45° 140 KCAS (161 m.p.h.) Minimum control 83 KCAS ( 95 m.p.h.)

Model 402B, S/N 402B1001 and up (IAS)

> 156 KIAS (180 m.p.h.) Maneuvering Maximum structural cruising 199 KIAS (229 m.p.h.) Never exceed 230 KIAS (265 m.p.h.) Landing gear operating 140 KIAS (161 m.p.h.) Landing gear extended 140 KIAS (161 m.p.h.) Flaps extended 15° 160 KIAS (184 m.p.h.) Flaps extended 45° 140 KIAS (161 m.p.h.) Minimum control 82 KIAS ( 94 m.p.h.)

(+150.8) to (+159.7) at 6300 lb. C.G. Range (Landing Gear Extended) (+160.2) at 5900 lb. or less (+147.5) at 5000 lb. or less

> Straight line variation between points given Landing gear retracted moment change: +837 in.-lb.

Empty Wt. C.G. Range None

Leveling Means External screw heads on right side of fuselage at stations

+213.65 and +238.00 on W.L. +93.80

Models 402, 402A, 402B, S/N 402B0001 through 402B1300 Maximum Weight

Landing 6200 lb., takeoff 6300 lb.

Model 402B, S/N 402B1301 and up

Landing 6200 lb., ramp 6335 lb., takeoff 6300 lb.

No. of Seats

9 (2 at +137.0, 2 at +166.0, 2 at +193.0, 2 at +220.0, 1 at +247.0)

Model 402A and 402B, S/N 402B0001 through 402B0300

9 or 10 (2 at +137.0, 2 at +166.0, 2 at +193.0, 2 at +220.0, 1 or 2 at +247.0)

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## III - Model 402, Model 402A, Model 402B (cont'd)

Model 402B, S/N 402B0301 and up

6, 7 or 8 (2 at +137.0, 2 at +175.0, 2 at +218.0, 1 or 2 at +261.0)

9 (with photographic provisions option) (2 at +137.0, 2 at +162.0, 2 at +190.0, 2 at

+218.0, 1 at +246.0)

10 (2 at +137.0, 2 at +162.0, 2 at +190.0, 2 at +218.0, 2 at +246.0) (See manufacturer's equipment list for optional seating arrangements)

Maximum Baggage Models 402, 402A and 402B, S/N 402B0001 through 402B0300

350 lb. (+71.0), 240 lb. (+186.0), 170 lb. (+247.0)

Model 402B, S/N 402B0301 and up

250 lb. (+32.0), 350 lb. (+71.0), 240 lb. (+186.0), 400 lb.

(+266.0), 100 lb. (+282.0)

Fuel Capacity 102 gal. (2 wing tip tanks, 51 gal. ea., 50 gal. usable at +152.0)

See NOTE 1 for data on unusable fuel

Oil Capacity 26 qt. (13 qt. in ea. engine at +113.5; usable 6.5 qt. per engine)

See NOTE 1 for data on undrainable oil

Control Surface Movements Wing flaps Down  $45^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$ 

Main surfaces

(Read degrees normal to rudder hinge line)

Tab (main surface in neutral)

 Aileron
 Up
  $20^{\circ}, +1^{\circ}, -0^{\circ}$  Down
  $20^{\circ}, +1^{\circ}, -0^{\circ}$  

 Elevator
 Up
  $5^{\circ}, +1^{\circ}, -0^{\circ}$  Down
  $30^{\circ}, +1^{\circ}, -0^{\circ}$  

 Rudder
 Right
  $7^{\circ}, +1^{\circ}, -0^{\circ}$  Left
  $9^{\circ}, +1^{\circ}, -0^{\circ}$ 

(Read degrees normal to rudder hinge line)

Serial Nos. Eligible Model 402: 402-0001 through 402-0322

Model 402A: 402A0001 through 402A0129 Model 402B: 402B0001 through 402B1384

## IV - Model 421 (Normal Category), Approved May 1, 1967

#### Model 421A (Normal Category), Approved November 19, 1968

Engines Two Continental GTSIO-520-D, reduction gear ratio .667:1

Fuel Grade 100 or 100LL aviation gasoline

Engine Limits For all operations, 2275 propeller r.p.m. (375 hp.)

39.5 in. Hg. Mp. up to critical altitude of 16,000 ft. in standard atmosphere. Above

 $16,\!000$  ft. the following maximum Mp. applies for maximum r.p.m.

Mo	<u>del 421</u>	<u>Model 421A</u>					
	Max. Allowable		Max. Allowable				
Altitude (ft.)	Mp. (in. Hg.)	Altitude (ft.)	Mp. (in. Hg.)				
16,000	39.5	16,000	39.5				
18,000	32.5	18,000	37.5				
20,000	32.5	20,000	35.5				
22,000	30.0	22,500	32.5				
24,000	27.0	24,000	30.5				
26,000	24.5	26,000	28.0				
28,000	22.0	28,000	25.5				
30,000	20.0	30,000	23.0				

## IV - Model 421, Model 421A (cont'd)

Propeller and Propeller Limits Two McCauley full-feathered 3-bladed propeller installations

(a) McCauley hub 3AF34C92 with 90LF-0 blades or McCauley hub 3AF37C516 with 90LFB-0 blades.

Diameter: not over 90.0 in., not under 88.0 in.

(no further reduction permitted)

Pitch settings at 30 in. station:

low  $16.9^{\circ}$ ,  $\pm 0.2^{\circ}$  feathering  $84.5^{\circ}$ ,  $\pm 0.3^{\circ}$ ,

(b) Hydraulic Governor Woodward 210594, 210595, 210596, or 210597.

(c) Propeller spinner and bulkhead assembly, McCauley D-3573/D-3576, for use with C92 Model propeller, or McCauley D-7229 spinner and bulkhead assembly for use

with C516 Model propeller.

Airspeed Limits (CAS)

184 m.p.h. (160 knots) Maneuvering Maximum structural cruising 230 m.p.h. (200 knots) Never exceed 272 m.p.h. (236 knots) Landing gear operating 165 m.p.h. (143 knots) Landing gear extended 165 m.p.h. (143 knots) Flaps extended 15° 180 m.p.h. (156 knots) Flaps extended 45° 165 m.p.h. (143 knots) Minimum control 106.5 m.p.h. (93 knots)

C.G. Range (Landing Gear Extended)

Model 421 (+151.9) to (+155.5) at 6800 lb. (+155.7) at 6400 lb. or less (+144.3) at 5200 lb. or less (+144.3) at 5200 lb. or less

Straight line variation between points given Landing gear retracted moment change: +889 in.-lb.

Empty Wt. C.G. Range

None

Leveling Means

Maximum Weight

External screw heads on right side of fuselage at stations +213.29 and +238.55 on W.L. +93.80

. . . .

<u>Model 421</u>

Landing 6500 lb., takeoff 6800 lb. (See NOTE 4 for takeoff 6840 lb.)

Model 421A

Landing 6500 lb., takeoff 6840 lb.

No. of Seats

Model 421

6 (2 at +137.0, 2 at +175.5, 2 at +215.5)

Model 421A

6 or 7 (2 at +137.0, 2 at +175.5, 2 at +215.5, 1 at +246.5)

(See manufacturer's equipment list for optional seating arrangement)

Maximum Baggage 350 lb. (+71.0), 240 lb. (+186.0), 340 lb. (+246.5)

Fuel Capacity 175 gal. (2 wing tip tanks, 51 gal. ea., 50 gal. usable at +152.0

and 2 wing tanks, 36.5 gal. ea., 35 gal. usable at +164.0)

See NOTE 1 for data on unusable fuel

Oil Capacity 26 qt. (13 qt. in ea. engine at +115.4; usable 7.0 qt. per engine)

See NOTE 1 for data on undrainable oil

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## IV - Model 421, Model 421A (cont'd)

Control Surface Movements Wing flaps Down 45°, +1°, -0°

(Read degrees normal to rudder hinge line)

Tab (main surface in neutral)

Aileron Up  $20^{\circ}, +1^{\circ}, -0^{\circ}$  Down  $20^{\circ}, +1^{\circ}, -0^{\circ}$  Elevator Up  $10^{\circ}, +1^{\circ}, -0^{\circ}$  Down  $26^{\circ}, +1^{\circ}, -0^{\circ}$  Rudder Right  $11^{\circ}, +1^{\circ}, -0^{\circ}$  Left  $16^{\circ}, +1^{\circ}, -0^{\circ}$ 

(Read degrees normal to rudder hinge line)

Serial Nos. Eligible Model 421: 421-0001 through 421-0200

Model 421A: 421A0001 through 421A0158

#### V - Model 414 (Normal Category), Approved September 24, 1969

Engines Two Continental TSIO-520-J or TSIO-520-JB (In any combination)

(S/N 414-0001 through 414-0800)

Two Continental TSIO-520-N or TSIO-520-NB (In any combination)

(S/N 414-0801 and up)

Fuel Grade 100 or 100LL aviation gasoline

Engine Limits For all operations, 2700 r.p.m. (310 hp.)

36.0 in. Hg. Mp. (S/N 414-0001 through 414-0800) 38.0 in. Hg. Mp.

(S/N 414-0801 and up) up to critical altitude of 20,000 ft. in standard atmosphere. Above 20,000 ft. the following maximum Mp. applies for maximum r.p.m.

#### S/N 414-0001 through 414-0800

Altitude (ft.)	Max. Allowable Mp. (in. Hg.)
20,000	36.0
22,000	33.6
24,000	31.2
26,000	28.8
28,000	26.4
30,000	24.0
24,000 26,000 28,000	31.2 28.8 26.4

## S/N 414-0801 and up

Altitude (ft.)	Max. Allowable Mp. (in. Hg.)
20,000	38.0
22,000	35.2
24,000	32.3
26,000	29.8
28,000	27.4
30,000	25.0

Propeller and Propeller Limits Two McCauley full-feathered 3-bladed propeller installations

(a) McCauley hub 3AF32C93 with 82NC-5.5 blades or McCauley hub 3AF32C505 with 82NEA-5.5 blades

Diameter: not over 76.5 in., not under 74.5 in. (S/N 414-0001 through S/N 414-0800), not under 75.0 in. (S/N 414-0801 and up)

(no further reduction permitted) Pitch settings at 30 in. station:

low  $14.9^{\circ}$ ,  $\pm 0.2^{\circ}$ , feathering  $81.2^{\circ}$ ,  $\pm 0.3^{\circ}$ 

## V - Model 414 (Normal Category), Approved September 24, 1969

Propeller and Propeller Limits (b) Model 414 S/N 414-0001 thru 414-0800

Hydraulic governor, Woodward B210444, C210439, B210446F,

or A210529H

McCauley DCF290D1/T3,DFC290D2/T3, DCF290D7/T3, DCFU290D1/T3, DCFS290D1/T3, DCFS290D1/T3, DCFS290D2/T3, DCFU290D2/T3, DCFU290D7/T3, DCFU290D13/T3, DCFS290D7/T3, DCFUS290D2/T3,

DCFUS290D7/T3 or DCFUS290D13/T3

Model 414 S/N 414-0801 and up

McCauley DCFS290D4/T3, DCFUS290D4/T3, DCFS290D5/T3,

DCFUS290D5/T3, DCFS290D7/T3, or DCFUS290D7/T3, DCFS290D8/T3,

DCFUS290D8/T3, DCFUS290D12/T3, or DCFUS290D13/T3

(c) Propeller spinner and bulkhead assembly, McCauley D-3534/D-3537,

D-3534/D-3796, or D-5212/D-5214.

Airspeed Limits (CAS)

## S/N 414-0001 through 414-0450

Maneuvering	180 m.p.h. (156 knots)
Maximum structural cruising	230 m.p.h. (200 knots)
Never exceed	266 m.p.h. (231 knots)
Flaps extended 15°	180 m.p.h. (157 knots)
Flaps extended 45°	160 m.p.h. (139 knots)
Landing gear operating	160 m.p.h. (139 knots)
Landing gear extended	160 m.p.h. (139 knots)
Minimum control	97 m.p.h. ( 84 knots)

#### S/N 414-0451 through 414-0800

Maneuvering	156 KCAS (180 m.p.h.)
Maximum structural cruising	200 KCAS (230 m.p.h.)
Never exceed	231 KCAS (266 m.p.h.)
Flaps extended 15°	160 KCAS (184 m.p.h.)
Flaps extended 45°	140 KCAS (161 m.p.h.)
Landing gear operating	140 KCAS (161 m.p.h.)
Landing gear extended	140 KCAS (161 m.p.h.)
Minimum control	84 KCAS ( 97 m.p.h.)

(IAS)

## S/N 414-0801 and up

Maneuvering	160 KIAS (184 m.p.h.)
Maximum structural cruising	205 KIAS (236 m.p.h.)
Never exceed	236 KIAS (272 m.p.h.)
Flaps extended 15°	164 KIAS (189 m.p.h.)
Flaps extended 45°	147 KIAS (169 m.p.h.)
Landing gear operating	143 KIAS (165 m.p.h.)
Landing gear extended	143 KIAS (165 m.p.h.)
Minimum control	82 KIAS ( 94 m.p.h.)

C.G. Range (Landing Gear Extended)

(+150.9) to (+159.7) at 6350 lb. (+160.2) at 5950 lb. or less (+147.5) at 5000 lb. or less

Straight line variation between points given Landing gear retracted moment change: +837 in.-lb.

Empty Wt. C.G. Range

None

Leveling Means

External screw heads on right side of fuselage at stations +213.29 and +238.55 on W.L. +93.80

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#### V - Model 414 (cont'd)

Maximum Weight Landing 6200 lb., takeoff 6350 lb.

No. of Seats <u>S/N 414-0001 through 414-0350</u>

6 or 7 (2 at +137.0, 2 at +175.5, 2 at +215.5, 1 at +246.5)

S/N 414-0351 and up

6 (2 at +137.0, 2 at +175.0, 2 at +218.0)

7 (with toilet option) (2 at +137.0, 2 at +175.0, 2 at +218.0, 1 at +250.0) (See manufacturer's equipment list for optional seating arrangements)

Maximum Baggage S/N 414-0001 through 414-0350

350 lb. (+71.0), 240 lb. (+186.0), 340 lb. (+246.5)

S/N 414-0351 and up

350 lb. (+71.0), 240 lb. (+186.0), 400 lb. (+266.0), 100 lb. (+282.0)

Fuel Capacity 102 gal. (2 wing tip tanks, 51 gal. ea., 50 gal. usable at +152.0)

See NOTE 1 for data on unusable fuel

Oil Capacity 26 qt. (13 qt. in ea. engine at +113.5; usable 6.5 qt. per engine)

See NOTE 1 for data on undrainable oil

Control Surface Movements Wing flaps Down 45°, +1°, -0°

Rudder Right 32°, +1°, -0° Left 32°, +1°, -0°

(Read degrees normal to rudder hinge line)

Tab (main surface in neutral)

(Read degrees normal to rudder hinge line)

Serial Nos. Eligible 414-0001 through 414-0965

## VI - Model 421B, Golden Eagle, (Normal Category), Approved April 28, 1970

Engines Two Continental GTSIO-520-H reduction gear ratio .667:1

Fuel Grade 100 or 100LL aviation gasoline

Engine Limits For all operations, 2275 propeller r.p.m. (375 hp.)

39.5 in. Hg. Mp. up to critical altitude of 18,000 ft. in standard atmosphere. Above

18,000 ft. the following maximum Mp. applies for maximum r.p.m.:

Altitude (ft.)	Max. Allowable Mp. (in. Hg.)
18,000	39.5
20,000	37.5
22,000	35.5
24,000	33.5
25,000	32.5
26,000	31.3
28,000	28.5
30,000	25.5

## VI - Model 421B (cont'd)

Propeller and Propeller Limits Two McCauley full-feathered 3-bladed propeller installations

(a) McCauley hub 3AF34C92 with 90LF-0 blades or

McCauley hub 3AF37C516 with 90LFB-0 blades

Diameter: not over 90.0 in., not under 88.0 in.

(no further reduction permitted)

Pitch settings at 30 in. station:

low 16.9°, ±0.2°

feathering 84.5°, ±0.3°

## (b) Model 421B S/N 421B0001 thru 421B0500

Hydraulic governor Woodward 210594, 210595, 210596 or 210597

Model 421B S/N 421B0501 and up

McCauley DCF290D2/T4, DFC7290D2/T4, DCFS290D2/T4, DCFUS290D2/T4,

DCF290D7/T4, DCFU290D7/T4, DCFS290D7/T4, DCFUS290D7/T4,

DCFU290D13/T4 or DCFUS290D13/T4.

(c) Propeller spinner and bulkhead assembly, McCauley D-3534/D-3796.

Airspeed Limits (CAS)

#### Model 421B: S/N 421B0001 through 421B0500

Maneuvering	175 m.p.h. (152 knots)
Maximum structural cruising	230 m.p.h. (200 knots)
Never exceed	274 m.p.h. (238 knots)
Landing gear operating	165 m.p.h. (143 knots)
Landing gear extended	165 m.p.h. (143 knots)
Flaps extended 15° (S/N 421B0001 through 421B0200)	180 m.p.h. (156 knots)
Flaps extended 15° (S/N 421B0201 through 421B0500)	200 m.p.h. (174 knots)
Flaps extended 45°	165 m.p.h. (143 knots)
Minimum control	100 m.p.h. (87 knots)

## Model 421B: S/N 421B0501 and up

Maneuvering	152 KCAS (175 m.p.h.)
Maximum structural cruising	200 KCAS (230 m.p.h.)
Never exceed	238 KCAS (274 m.p.h.)
Landing gear operating	145 KCAS (167 m.p.h.)
Landing gear extended	145 KCAS (167 m.p.h.)
Flaps extended 15°	175 KCAS (202 m.p.h.)
Flaps extended 45°	145 KCAS (167 m.p.h.)
Minimum control (S/N 421B0501 through 421B0800)	87 KCAS (100 m.p.h.)
Minimum control (S/N 421B0801 and up)	82 KCAS ( 94 m.p.h.)

10 Place

C.G. Range (Landing Gear Extended)

## S/N 421B0001 through 421B0200

$\overline{(+151.8)}$ to $(+156.4)$ at 7250 lb.	(+151.8) to (+157.7) at 7250 lb.
(+156.7) at 6850 lb. or less	(+158.0) at 6850 lb. or less
(+147.1) at 6100 lb. or less	(+147.1) at 6100 lb. or less

## S/N 421B0201 and up

6, 7, or 8 Place

(+152.6) to (+156.5) at 7450 lb. (+152.6) to (+157.8) at 7450 lb. (+156.7) at 7050 lb. or less (+147.1) at 6100 lb. or less (+147.1) at 6100 lb. or less

Straight line variation between points given

Landing gear retracted moment change: +889 in.-lb.

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VI - Model 421B (cont'd)

Empty Wt. C.G. Range None

Leveling Means External screw heads on right side of fuselage at stations +213.9 and

+238.55 on W.L. +93.80

Maximum Weight Landing 7200 lb., takeoff 7250 lb. (S/N 421B0001 through 421B0200)

Landing 7200 lb., takeoff 7450 lb. (S/N 421B0201 and up)

No. of Seats <u>S/N 421B0001 through 421B0300</u>

6, 7, or 8 (2 at +137.0, 2 at +175.5, 2 at +215.5, 2 at +245.7)

or 10 (2 at +137.0, 2 at +161.0, 2 at +190.0, 2 at +218.0, 2 at +249.0)

S/N 421B0301 and up

6, 7, or 8 (2 at +137.0, 2 at +175.0, 2 at +218.0, 2 at +261.0) or 10 (2 at +137.0, 2 at +162.0, 2 at +190.0, 2 at +218.0, 2 at +246.0) (See manufacturer's equipment list for optional seating arrangements)

Maximum Baggage S/N 421B0001 through 421B0300

250 lb. (+32.0), 350 lb. (+71.0), 400 lb. (+186.0), 340 lb. (+246.5)

S/N 421B0301 and up

250 lb. (+32.0), 350 lb. (+71.0), 400 lb. (+186.0), 400 lb. (+266.0), 100 lb. (+282.0)

Fuel Capacity 175 gal. (2 wing tip tanks, 51 gal. ea., 50 gal. usable at +152.0 and 2 wing tanks,

36.5 gal. ea., 35 gal. usable at +164.0) See NOTE 1 for data on unusable fuel

Oil Capacity 26 qt. (13 qt. in ea. engine at +115.4; usable 7.0 qt. per engine)

See NOTE 1 for data on undrainable oil

Control Surface Movements Wing flaps Down  $45^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$ 

(S/N 421B0001 through 421B0800)

Right  $32^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$  Left  $32^{\circ}$ ,  $+1^{\circ}$ ,  $-0^{\circ}$  (S/N 421B0801 and up)

(Read degrees normal to rudder hinge line)

Tab (main surface in neutral)

(Read degrees normal to rudder hinge line)

Serial Nos. Eligible 421B0001 through 421B0970

## VII - Model 421C, Golden Eagle, (Normal Category), Approved October 28, 1975

Engines Two Continental GTSIO-520-L reduction gear ratio .667:1

(S/N 421C0001 through 421C1000)

Two Continental GTSIO-520-N reduction gear ratio .667:1

(S/N 421C1001 and up)

Fuel Grade 100 or 100LL aviation gasoline

## VII - Model 421C (cont'd)

**Engine Limits** 

For all operations, 2235 propeller r.p.m. (375 hp.)

39.0 in. Hg. Mp. up to critical altitude of 20,000 ft. in standard atmosphere. Above 20,000 ft. the following maximum Mp. applies for maximum r.p.m.:

Altitude (ft.)	Max. Allowable Mp. (in. Hg.)
20,000	39.0
22,000	36.5
24,000	34.0
25,000	32.5
26,000	31.0
28,000	28.0
30,000	25.0

Propeller and Propeller Limits Two McCauley full-feathering 3-bladed propeller installations

(a) McCauley hub 3FF32C501 with 90UMB-0 blades

Diameter: not over 90.0 in., not under 88.0 in.

(no further reduction permitted)

Pitch settings at 30 in. station:

low  $16.6^{\circ}$ ,  $\pm 0.2^{\circ}$ , feathering  $84.6^{\circ}$ ,  $\pm 0.3^{\circ}$ 

(b) S/N 421C0001 through 421C0800

Hydraulic Governor McCauley DCF290D2/T6, DCFU290D2/T6,

DCFS290D2/T6, DCFUS290D2/T6, DCF290D7/T6, DCFU290D7/T6 or

DCFU290D13/T6, DCFS290D7/T6, DCFUS290D7/T6 or DCFUS290D13/T6

S/N 421C0801 and up

Hydraulic Governor McCauley DCF290D7/T6, DCFU290D7/T6 or

DCFU290D13/T6, DCFS290D9/T6, DCFUS290D9/T6

(c) Propeller spinner and bulkhead assembly, McCauley D-3534/D-4506 or McCauley D-5212/D-5217

Airspeed Limits	
(IAS)	

Maneuvering	151 KIAS (174 m.p.h.)
Maximum structural cruising	201 KIAS (231 m.p.h.)
Never exceed	240 KIAS (276 m.p.h.)
Landing gear operating	176 KIAS (203 m.p.h.)
Landing gear extended	176 KIAS (203 m.p.h.)
Flaps extended 15°	176 KIAS (203 m.p.h.)
Flaps extended 45°	146 KIAS (168 m.p.h.)
Minimum control	80 KIAS ( 92 m.p.h.)

## C.G. Range (Landing Gear Extended)

## 6, 7, 8, 9 or 10 Place

(+152.6) to (+158.0) at 7450 lb.

(+147.1) at 6100 lb. or less

Straight line variation between points given Landing gear retracted moment change:

+917 in.-lb. (S/N 421C0001 through 421C0800)

+1318 in.-lb. (S/N 421C0801 and up)

## Empty Wt. C.G. Range

None

Leveling Means

External screw heads on right side of fuselage at stations +213.9 and +238.55 on W.L. +93.80

Maximum Weight

<u>S/N 421C0001 through 421C0400</u> Landing 7200 lb., takeoff 7450 lb.

S/N 421C0401 and up

Landing 7200 lb., takeoff 7450 lb., ramp 7500 lb.

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#### VII - Model 421C (cont'd)

No. of Seats 6, 7 or 8 (2 at +137.0, 2 at +175.0, 2 at +218.0, 1 at +261.0)

or 10 (2 at +137.0, 2 at +162.0, 2 at +190.0, 2 at +218.0, 2 at +246.0) (See manufacturer's equipment list for optional seating arrangements)

Maximum Baggage 250 lb. (+32.0), 350 lb. (+71.0), 400 lb. (+186.0), 400 lb. (+266.0), 100 lb. (+282.0)

Fuel Capacity 213.4 gal. (2 wing tanks, 106.7 gal. ea., 103.0 gal. usable at +161.0)

See NOTE 1 for data on unusable fuel

Oil Capacity 26 qt. (13 qt. in ea. engine at +115.4; usable 7.0 qt. per engine)

See NOTE 1 for data on undrainable oil

Control Surface Movements Wing flaps Down 45°, +1°, -0°

Main surfaces

(Read degrees normal to rudder hinge line)

Tab (main surface in neutral)

(Read degrees normal to rudder hinge line)

Serial Nos. Eligible 421C0001 through 421C1807

## VIII - Model 414A, Chancellor, (Normal Category), Approved September 30, 1977

Engines Two Continental TSIO-520-N or TSIO-520-NB (In any combination)

(S/N 414A0001 through 414A0200)

Two Continental TSIO-520-NB (S/N 414A0201 and up)

Fuel Grade 100 or 100LL Aviation Gasoline

Engine Limits For all operations, 2700 r.p.m., 310 hp., 38.0 in. Hg. Mp. up to

critical altitude of 20,000 ft. in standard atmosphere.

Above 20,000 ft. the following maximum Mp. applies for maximum r.p.m.:

Altitude (ft.)	Max. Allowable Mp. (in. Hg.)
20,000	38.0
22,000	35.2
24,000	32.3
26,000	29.8
28,000	27.4
30,000	25.0

Propeller and Propeller Limits Two McCauley full-feathering three-bladed propeller installations

(a) McCauley hub 3AF32C93 with 82NC-5.5 blades or McCauley hub

3AF32C505 with 82NEA-5.5 blades

Diameter: not over 76.5 in., not under 75.0 in.

(no further reduction permitted)

Pitch settings at 30 in. station:

low  $14.9^{\circ}$ ,  $\pm 0.2^{\circ}$ , feathering  $81.2^{\circ}$ ,  $\pm 0.3^{\circ}$ 

or (b) McCauley hub 3AF32C93 with 82NC-5.5 blades or McCauley hub

3AF32C505 with 82NEA-5.5 blades

Diameter: not over 75.5 in., not under 75 in.

Pitch settings at 30 in. station:

low 15.2°,  $\pm$ 0.2° feathered 81.2°,  $\pm$ 0.3°

#### VIII - Model 414A (cont'd)

Propeller and Propeller Limits

#### (c) <u>S/N 414A0001 through 414A0801</u>

Hydraulic governor McCauley DCF290D2/T3, DCFU290D2/T3, DCFS290D4/T3, DCFUS290D4/T3, DCFS290D6/T3, DCFUS290D6/T3, DCFUS290D7/T3, DCFU290D7/T3, DCFU290D13/T3, DCFS290D7/T3, DCFUS290D13/T3, DCFS290D8/T3, DCFUS290D8/T3 or DCFUS290D12/T13

#### S/N 414AC0801 and up

Hydraulic governor McCauley DCF290D2/T3, DCFU290D2/T3, DCF290D7/T3, DCFU290D7/T3 or DCFU290D13/T3, DCFS290D9/T3, DCFUS290D9/T3

(d) Propeller spinner and bulkhead assembly, McCauley D-3534/D-3796, or McCauley D-5212/D-5214

Airspeed Limits

(IAS)

Maneuvering 145 KIAS (167 m.p.h.) Max. structural cruising 203 KIAS (234 m.p.h.) Never exceed 237 KIAS (273 m.p.h.) Landing gear operating 177 KIAS (204 m.p.h.) Landing gear extended 177 KIAS (204 m.p.h.) Flaps extended 15° 177 KIAS (204 m.p.h.) Flaps extended 45° 146 KIAS (168 m.p.h.) Minimum control 79 KIAS (91 m.p.h.)

C.G. Range (Landing Gear Extended)

(+151.3) to (+160.0) at 6750 lb. (+147.8) at 5800 lb. or less

Straight line variation between points given Landing gear retracted moment change: +917 in.-lb.

Empty Wt. C.G. Range

None

Leveling Means

External screw heads on right side of fuselage at stations +213.29 and +238.55 on W.L. +93.80

Maximum Weight

Ramp 6785 lb., takeoff and landing 6750 lb.

No. of Seats

6, 7 or 8 (2 at +137.0, 2 at +175.0, 2 at +218.0, Optional: 1 or 2 at +261.0 or with toilet option, 1 at +250.0)

(See manufacturer's equipment list for optional seating arrangements)

Maximum Baggage

250 lb. (+32.0), 350 lb. (+71.0), 400 lb. (+186.0), 400 lb. (+266.0), 100 lb. (+282.0)

Fuel Capacity

#### S/N 414A0001 through 414A0200

213.4 gal. (2 wing tanks, 106.7 gal. ea., 103.0 gal. usable at +161.0)

See NOTE 1 for data on unusable fuel

#### S/N 414A0201 through 414A0400

213.4 gal. (2 wing tanks, 106.7 gal. ea., 102.0 gal. usable at +161.0)

See NOTE 1 for data on unusable fuel

## S/N 414A0401 and up

213.4 gal. (2 wing tanks, 106.7 gal. ea., 103.0 gal. usable at +161.0)

See NOTE 1 for data on unusable fuel

Oil Capacity

26 qt. (13 qt. in ea. engine at +110.9; usable 6.5 qt. per engine)

See NOTE 1 for data on undrainable oil

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## VIII - Model 414A (cont'd)

<u>- Miduel 414A</u> (cont u)					
Control Surface Movements	Wing flaps			Down	45°, +1°, -0°
	Main surfaces				
	Aileron	Up	$20^{\circ}, +1^{\circ}, -0^{\circ}$	Down	20°, +1°, -0°
	Elevator	Up	$25^{\circ}$ , $+1^{\circ}$ , $-0^{\circ}$	Down	15°, +1°, -0°
	Rudder	Right	32°, +1°, -0°	Left	32°, +1°, -0°
	(Read degree	es normal to	rudder hinge line	)	
	Tab (main surface i	in neutral)			
	Aileron	Up	$20^{\circ}$ , $+1^{\circ}$ , $-0^{\circ}$	Down	$20^{\circ}$ , $+1^{\circ}$ , $-0^{\circ}$
	Elevator	Up	$12^{\circ}, +1^{\circ}, -0^{\circ}$	Down	$20^{\circ}$ , $+1^{\circ}$ , $-0^{\circ}$
	Rudder	Right	$11^{\circ}, +1^{\circ}, -0^{\circ}$	Left	16°, +1°, -0°

(Read degrees normal to rudder hinge line)

Serial Nos. Eligible

414A0001 through 414A1212

#### IX - Model 402C, Businessliner/Utililiner, (Normal Category), Approved September 25, 1978

Engines Two Continental TSIO-520-VB rated at 325 hp.

Fuel Grade 100 or 100LL aviation gasoline

Engine Limits Takeoff and engine inoperative, 2700 r.p.m., 39.0 in. Hg. Mp. up to 12,000 ft. Above

12,000 ft. the following maximum Mp. applies for maximum r.p.m.

Altitude (ft.)	Max. Allowable Mp. (in. Hg.)
S.L. to	
12,000	39.0
14,000	37.2
16,000	37.2
18,000	32.0
20,000	29.5
22,000	27.0
24,000	25.0
26,000	23.0
28,000	21.0
30,000	19.0

Propeller and Propeller Limits Two McCauley full-feathering three-bladed propeller installations

(a) McCauley hub 3AF32C93 with 82NC-5.5 blades or McCauley hub 3AF32C505 with 82NEA-5.5 blades

Diameter: not over 76.5 in., not under 75.0 in.

(no further reduction permitted)

Pitch settings at 30 in. station:

low  $14.9^{\circ}$ ,  $\pm 0.2^{\circ}$ , feathering  $82.2^{\circ}$ ,  $\pm 0.3^{\circ}$ 

or (b) McCauley hub 3AF32C93 with 82NC-6.5 blades or McCauley hub

3AF32C505 with 82NEA-6.5 blades

Diameter: not over 75.5 in., not under 75.0 in.

Pitch settings at 30 in. station:

low 15.2°,  $\pm 0.2$ °, feathering 82.2°,  $\pm 0.3$ °

(c) S/N 402C0001 through 402C0600

Hydraulic governor, Woodward B210444, C210439; McCauley DCF290D7/T3, DCFUS290D7/T3, DCFUS290D13/T3, DCFUS290D7/T3, DCFUS290D7/T3, DCFUS290D8/T3, or DCFUS290D12/T3

S/N 689, and 402C0601 and up

Hydraulic governor, Woodward B210444, C210439; McCauley DCF290D7/T3, DCFU290D7/T3 or DCFU290D13/T3, DCFS290D9/T3, DCFUS290D9/T3

(d) Propeller spinner and bulkhead assembly; McCauley D-3534/D-3537, D-3534/D-3796, or D-5212/D-5214

IX - Model 402C (cont'd)					
Airspeed Limits	Maneuvering		150 KIAS	(173 m.p.h.)	
(IAS)	Max. structural cruising			(236 m.p.h.)	
	Never exceed			(270 m.p.h.)	
				3 (207 m.p.h.)	
	Landing gear extended 180 KIAS (				
	Flaps extended 15° Flaps extended 45°			3 (207 m.p.h.) 3 (172 m.p.h.)	
	Minimum control			6 (92 m.p.h.)	
C.G. Range (Landing	(+151.58) to (+160.67) at 6				
Gear Extended)	(+149.08) at 5800 lbs. or le				
	Straight line variation betw		. 11		
	Landing gear retracted mor	nent change: +917	ınlb.		
Empty Wt. C.G. Range	None				
Leveling Means	External screw heads on rig +238.00 on W.L. +93.80	External screw heads on right side of fuselage at stations $+213.65$ and $+238.00$ on W.L. $+93.80$			
Maximum Weight	Ramp, 6885 lbs., takeoff ar	nd landing 6850 lbs	3.		
No. of Seats	6, 7 or 8 (2 at +137.0, 2 at +175.0, 2 at +218.0, 1 or 2 at +261.0) 9 (with photographic provisions option) (2 at +137.0, 2 at +162.0, 2 at +190.0, 2 at +218.0, 1 at +246.0)				
	10 (2 at +137.0, 2 at +162.0, 2 at +190.0, 2 at +218.0, 2 at +246.0) (See manufacturer's equipment list for optional seating arrangements)				
Maximum Baggage	250 lbs. (+32.0), 350 lbs. (+71.0), 400 lbs. (+186.0), 400 lbs. (+266.0), 100 lbs. (+282.0)				
Fuel Capacity	S/N 402C0001 through 402		1 11 .	.1.(1.0)	
	213.4 gal. (2 wing tanks, 10 See NOTE 1 for data on un		ai. usabie at	+161.0)	
	S/N 689, and 402C0201 ar				
	213.4 gal. (2 wing tanks, 10 See NOTE 1 for data on un		al. usable at	+161.0)	
Oil Capacity	26 qt. (13 qt. in ea. engine		.5 qt. per en	gine)	
	See NOTE 1 for data on ur	drainable oil			
Control Surface Movements	Wing flaps Main surfaces		Down	45°, +1°, -0°	
		Up 20°, +1°, -0°	Down	20°, +1°, -0°	
		Up 25°, +1°, -0°	Down	15°, +1°, -0°	
		ght 32°, +1°, -0°	Left	32°, +1°, -0°	
	(Read degrees normal to rudder hinge line)				
	Tab (main surface in neutral)				
		Up 20°, +1°, -0°	Down	20°, +1°, -0°	
		Up $12^{\circ}, +1^{\circ}, -0^{\circ}$	Down	20°, +1°, -0°	
		ght 11°, +1°, -0°	Left	$16^{\circ}$ , $+1^{\circ}$ , $-0^{\circ}$	

Serial Nos. Eligible  $689,\,402C0001\;through\;402C1020$ 

(Read degrees normal to rudder hinge line)

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## X - Model 425, Corsair or Conquest I (See NOTE 7), (Normal Category), Approved July 1, 1980

Engines Two Pratt & Whitney Aircraft of Canada, Ltd., PT6A-112 turboprop

Fuel Aviation turbine fuel Jet A, Jet A-1, or Jet B, JP-4, JP-5 or JP-8. For

required use of anti-icing additives and emergency use of aviation gasoline,

refer to the Pilot's Operating Handbook and FAA Approved Airplane Flight Manual.

Engine Limits

Takeoff static & max. continuous Starting (2 sec.) Maximum reverse

	Operating Limits							
	Ng Gas							
Sl	naft	Generator	Indicated		Permissible			
Horse	epower	Speed	Torque	Prop. Shaft	Interturbine			
Po	wer	(% rpm)	(ftlbs.)	Speed (rpm)	Temp. (°C.)			
·								
45	0*	101.6	1244	1900	725			
					1090			
43	0	101.6	1244	1815	725			

#### \*Flat Rated:

The engines may produce more power than that for which the airplane has been certificated. Under these conditions, the placarded torquemeter, ITT, or Ng limitations shall not be exceeded.

Propeller and Propeller Limits (1) Two Hartzell three-bladed, full-feathered, reversible

Hub: HC-B3TN-3C Blade: T10178B-8R

Diameter: Not over 93-3/8 in., not under 91 inches; no further reduction permitted

Pitch at 30-inch station:

Low pitch 20.2° Feathered 86.7° Reverse -10.9°

(2) Two McCauley three-bladed, full-feathered, reversible

Hub: 3GFR34C701 Blade: 93KB-0

Diameter: Not over 93 inches, not under 90-5/8 inches;

no further reduction permitted

Pitch at 30-inch station:

Low pitch 18.5° Feathered 85.5° Reverse -13.5°

Propellers may be interchanged in any combination.

Airspeed Limits (IAS)

V <sub>MO</sub> (Max Operating)	230 knots 265 m.p.h.
Sea level to 21,800 ft.	
M <sub>MO</sub> Above 21,800 ft.	.52 mach
V <sub>A</sub> (Maneuvering) at 8200 lbs.	154 knots 177 m.p.h.
V <sub>A</sub> (Maneuvering) at 8600 lbs.	157 knots 181 m.p.h.
V <sub>FE</sub> (Flaps extended)	
45° (Landing)	145 knots 169 m.p.h.
15° (Takeoff & Approach)	175 knots 201 m.p.h.
V <sub>MCA</sub> (Min. control speed) Air at 8200 lbs.	90 knots 104 m.p.h.
V <sub>MCA</sub> (Min. control speed) Air at 8600 lbs.	92 knots 106 m.p.h.
V <sub>LE</sub> (Landing gear extended)	175 knots 201 m.p.h.

X - Model 425 (cont'd)

C.G. Range (Landing Gear Extended)

S/N 425-0001 through 425-0176 (See NOTE 7)

(155.66) to (160.04) at 8200 lbs. (150.65) to (160.04) at 6478 lbs. or less

S/N 425-0177 and up

(156.81) to (160.04) at 8600 lbs. (150.65) to (160.04) at 6478 lbs. or less

Straight line variation between points given

Moment change due to retracting landing gear (+1448 in.-lb.)

Empty Wt. C.G. Range None

Leveling Means External screw heads on right side of fuselage at stations +213.9

and +238.55 on W.L. +93.80

Maximum Weight S/N 425-0001 through 425-0176 S/N 425-0177

 (See NOTE 7)
 and up

 Takeoff
 8200 lbs.
 8600 lbs.

 Landing
 8000 lbs.
 8000 lbs.

 Zero fuel
 6740 lbs.
 7000 lbs.

 Ramp
 8275 lbs.
 8675 lbs.

No. of Seats 6, 7 or 8 (2 at +137.0, 2 at +175.0, 2 at +218.0, 2 at +261.0)

See manufacturer's equipment list for optional seating arrangements

Maximum Baggage 250 lb. (+32.0), 350 lb. (+71.0), 400 lb. (+266.0), 100 lb. (+282.0)

Fuel Capacity 2497.8 lb. (372.8 gal.) total in two wing tanks, 1248.9 lb. (186.4 gal.) each; 2452.2 lb.

(366.0 gal.) usable total, 1226.1 lb. (133 gal.) in each tank at +163.3. Fuel weight based

on 6.70 lb./gal. See NOTE 1 for data on unusable fuel.

Oil Capacity 5.28 gal. total, 5.28 gal. usable (2.3 gal. in each engine-mounted tank at +125.3).

See NOTE 1 for data on undrainable oil.

Maximum Operating

Altitude

30,000 ft.

Control Surface Movements Wing flaps Down 45°, +1°, -0°

(Read degrees normal to rudder hinge line)

Tab (main surface in neutral)

Aileron Up  $20^{\circ}, +1^{\circ}, -0^{\circ}$  Down  $20^{\circ}, +1^{\circ}, -0^{\circ}$ Elevator Up  $6^{\circ}, +1^{\circ}, -0^{\circ}$  Down  $15^{\circ}, +1^{\circ}, -0^{\circ}$ Rudder Right  $11^{\circ}, +1^{\circ}, -0^{\circ}$  Left  $16^{\circ}, +1^{\circ}, -0^{\circ}$ 

(Read degrees normal to rudder hinge line)

Serial Nos. Eligible 425-0001 through 425-0236

Data Pertinent to All Models

Datum 100.00 in. forward face of fuselage bulkhead forward of rudder pedals.

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#### <u>X - Model 425</u> (cont'd) Certification Basis

# Models 401, 401A, 401B, 402, 402A, 402B, 411, 411A, 414, 421, 421A: Part 3 of the Civil Air Regulations dated May 15, 1956, as amended by 3-1 through 3-5

and 3-8.

#### Model 421B:

Part 3 of the Civil Air Regulations dated May 15, 1956, except Subpart B, as amended by 3-1 through 3-5 and 3-8; Subpart B, paragraphs 23.25 through 23.253 of the Federal Aviation Regulations dated February 1, 1965, as amended by 23-1 through 23-7.

#### Models 414A and 421C:

Part 3 of the Civil Air Regulations dated May 15, 1956, as amended by 3-1 through 3-5 and 3-8, excluding the following portions:

Subpart B and paragraphs 3.356, 3.357, 3.358, 3.359, 3.411, 3.429, 3.433, 3.434, 3.435, 3.436, 3.437, 3.445, 3.581, 3.582, 3.583, 3.584, 3.585, 3.587, 3.628, 3.666, 3.672, 3.673, 3.674, 3.675, 3.700(c), 3.728, 3.767(a) and 3.767(b). Include the following portions of FAR 23 dated February 1, 1965, as amended by 23-1 through 23-14; Subpart B and paragraphs 23.729, 23.901, 23.909, 23.951, 23.954, 23.955, 23.959, 23.973, 23.1041, 23.1043, 23.1047, 23.1143, 23.1305, 23.1387(e), 23.1435 and 23.1557(c); as amended by 23-1 through 23-21, paragraph 23.1385(c); as amended by 23-1 through 23-23, paragraph 23.1327. Add paragraph 23.1559(b) for Model 414A only. Findings of Equivalent Level of Safety were made for CAR 3.637, 3.757, and 3.778(a).

#### Model 402C:

Part 3 of the Civil Air Regulations dated May 15, 1956, as amended by 3-1 through 3-5 and 3-8, excluding the following portions: Subpart B and paragraphs 3.356, 3.357, 3.358, 3.359, 3.411, 3.429, 3.433, 3.434, 3.435, 3.436, 3.437, 3.445, 3.581, 3.582, 3.583, 3.584, 3.585, 3.587, 3.628, 3.666, 3.672, 3.673, 3.674, 3.675, 3.700(c), 3.728, 3.767(a) and 3.767(b). Include the following portions of FAR 23 dated February 1, 1965, as amended by 23-1 through 23-14: Subpart B and paragraphs 23.729, 23.901, 23.909, 23.951, 23.954, 23.955, 23.959, 23.973, 23.1041, 23.1043, 23.1047, 23.1143, 23.1305, 23.1387(e), 23.1435, 23.1557(c), and 23.1559(b); as amended by 23-1 through 23-21, paragraph 23.1385(c); as amended by 23-1 through 23-23, paragraph 23.1327. Part 36 of the Federal Aviation Regulations dated December 1, 1969, as amended by 36-1 through 36-7. Findings of Equivalent Level of Safety were made for CAR 3.637, 3.757, and 3.778(a).

#### Model 425

Part 3 of the Civil Air Regulations dated May 15, 1956, as amended by 3-1 through 3-6 and 3-8 as follows: Paragraphs 3.0 through 3.20, 3.291 through 3.307, 3.317 through 3.347, 3.371 through 3.401, 3.651, 3.652, 3.655(c) and (d), 3.661, 3.662, 3.668, 3.686 through 3.699, 3.711 through 3.728, 3.749, 3.791, and 3.792; the following portions of FAR 23 dated February 1, 1965, as amended by 23-1 through 23-21: Paragraphs 23.21 through 23.33, 23.45(a) through (d), 23.49 through 23.179, 23.181(a), 23.201 through 23.572, 23.629, 23.723 through 23.735, 23.865, 23.867, 23.901 through 23.1017, 23.1019(a)(1) and (2), 23.1019(a)(4) and (5), 23.1019(b), 23.1021 through 23.1203, 23.1303(a) through (d), 23.1305(a) through (u) and (w), 23.1323, 23.1325, 23.1327, 23.1329, 23.1335, 23.1337, 23.1351 through 23.1357, 23.1385 through 23.1401, 23.1441 through 23.1449, 23.1501 through 23.1521, 23.1524, 23.1525, 23.1527(b), and 23.1529 through 23.1589; Paragraph 25.831(d) of FAR 25 dated February 1, 1965, as amended by 25-1 through 25-43; FAR 36 dated December 1, 1969, as amended by 36-1 through 36-10; SFAR No. 27, Fuel Venting and Exhaust Emission Requirements for Turbine Engine Powered Airplanes, effective February 1, 1974, as amended by SFAR's 27-1, 27-2, and 27-3; plus Special Conditions 23-93-CE-12 as amended by Amendment No. 1 dated June 25, 1980. (See NOTE 3.)

## X - Model 425 (cont'd)

Certification Basis

## Model 414A (S/N 414A0401 and up, Model 421C (S/N 421C0801 and up)

In addition to the above certification basis, compliance with FAR 36, dated December 1, 1969, as amended by 36-1 through 36-10 (414A only) and 36-1 through 36-4 (421C only) has been demonstrated.

Model 402B, S/N 402B0501 and up

Model 402C

Model 414, S/N 414-0451 and up

Model 414A

Model 421B, S/N 421B0501 and up

Model 421C

Model 425

Markings, placards and manuals are primarily in knots instead of m.p.h. as required by CAR 3, but permitted by FAR 23, Amendment 23-7.

Model 402B, S/N 402B1001 and up

Model 414, S/N 414-0801 and up

Findings of equivalent level of safety were made for CAR 3.757 and 3.778(a).

Model 402B, S/N 402B0801 and up

Model 402C

Model 414, S/N 414-0601 and up

Model 414A

Model 421B, S/N 421B0801 and up

Model 421C

Model 425

In addition to the above certification basis, compliance with ice protection has been demonstrated in accordance with FAR 23.1419 of Amendment 23-14 effective December 20, 1973, when ice protection equipment is installed in accordance with Cessna Drawing 5914105 for 425, 5114400 for all other models, Factory Kit (FK) No. 194, Pilot's Operating Handbook and/or FAA Approved Airplane Flight Manual. Aircraft which have been modified in compliance with Accessory Kit (AK) No. 421-106 are considered to be equivalent to those with Factory Kit (FK) No. 194.

Application for Type Certificate dated September 18, 1961. Type Certificate No. A7CE issued August 17, 1964, obtained by the manufacturer under delegation option procedures.

**Production Basis** 

Production Certificate No. 312 issued and Delegation Option Manufacturer No. CE-3 authorized to issue airworthiness certificates under delegation option provisions of Part 21 of the Federal Aviation Regulations. Effective February 15, 1985, and on, Production Certificate No. 4 is applicable to all spares production. See NOTE 8 for specific effectivity of P.C. 4 on new airplane serials.

Equipment:

The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. In addition, the following item of equipment is required.

1. Stall warning indicator, Cessna dwg. 5018100 (401, 402, 411, 411A)

Stall warning indicator, Cessna dwg. 5118000 (421)

Stall warning indicator, Cessna dwg. 5618002 (414)

Stall warning indicator, Cessna dwg. 5218016 (401A, 402A, 401B, 402B0001 through 402B0300)

Stall warning indicator, Cessna dwg. 5118310 (421A)

Stall warning indicator, Cessna dwg. 5118402 (421B0001 through 421B0300)

Stall warning indicator, Cessna dwg. 5618021 (414-0351 and up, 421B0301 and up)

Stall warning indicator, Cessna dwg. 5218031 (402B0301 and up)

Stall warning indicator, Cessna dwg. 5118627 (421C)

Stall warning indicator, Cessna dwg. 5618041 (402C, 414A, 425)

or Angle of Attack Indicator System, Cessna Dwg. 0800302, Model 402B, 402C, 414, 414A, 421B, 421C.

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NOTE 1. Current weight and balance report together with list of equipment included in certificated empty weight and loading instructions when necessary must be provided for each aircraft at the time of original certification.

The certificated empty weight and corresponding center of gravity location must include undrainable oil (not included in oil capacity) and unusable fuel as follows:

- (a) Fuel. 12 lb. (tip) at (+152.0) (401, 401A, 401B, 402, 402A, 402B, 411, 411A, 414, 421, 421A, 421B)
  - 18 lb. (wing, standard 73 gal. at +164.0) (411, 411A, 421, 421A, 421B)
  - 24 lb. (wing, optional 100 gal. at +164.0) (411, 411A, 421, 421A, 421B, 402A, 402B, 414)
  - 6 lb. (wing, optional 63 gal. at +164.0) (402B0301 and up and 414-0351 and up)
  - 44 lb. (wing, 7.4 gal. at +165.2) (402C, S/N 689, and 402C0201 and up; 414A, S/N 414A0401 and up; 421C)
  - 68 lb. (wing, 11.4 gal. at +165.2) (414A, S/N 414A0001 through S/N 414A0200)
  - 56 lb. (wing, 9.4 gal. at +165.0) (402C, S/N 402C0001 through 402C0200; 414A, S/N 414A0201 through 414A0400)
  - 45.6 lb. (wing, 6.8 gal. at +166.2) (425)
- (b) If optional wing locker transfer tanks are installed 3.0 lb. (each 26 gal. tank) at (+176.0) (411, 411A, 421, 421A, 421B)
  - 3.0 lb. (each 20 gal. tank) at (+175.0) (401, 401A, 401B, 402, 402A, 402B, 414)
  - 2.0 lb. (each 28 gal. tank) at (+176.0) (421C0001 and up)
- (c) Oil 0.0 lb.
- NOTE 2. The placards specified in the FAA Approved Airplane Flight Manual must be displayed.

#### NOTE 3. Service information

The appropriate airplane service manual contains structural retirement lives, which may not be changed without FAA Engineering approval, for the following components:

	Part Number	<u>Hours</u>	<u>Model</u>
Windshield	5111604-1 & -2	13,200	414, 414A, 421A, 421B, 421C, 425
Windshield, heated	9910013-1	13,200	421, 421A
			(S/N 421A0001 through 421A0117)
Windshield, heated	9910071-1	13,200	414, 421A, 421B
			S/N 414-0001 through 414-0600, 421A0118
			through 421B0800)
Windshield, heated	9910214-1 & -2	13,200	414, 414A, 421B, 421C
			(S/N 414-0601 and up, 421B0801 through
			421C0800)
Windshield, heated	9910460-1 & -200	13,200	421C (S/N 421C0801 and up), 425
Upper cabin door	5111545-3	8,000	421 (S/N 421-0001 through 421-0079)
latch pins			
Upper cabin door latch pins	5111545-6	8,000	421 (S/N 421-0080 and up), 421A
Wing	5922125 not	10,200	425 (S/N -0002 thru -0176 except
· ·	modified by SK425-	48	airplanes incorporating SK425-17)
Wing	5922125 not	9,300	425 (S/N -0177 and On and airplanes
· ·	modified by SK425-	48	-0002 thru -0176 incorporating SK425-17)
Wing	5922125 modified by 30,000		425
- C	SK425-48	•	
Wing carry-thru	5911004, 5111225	30,000	425

NOTE 3. (cont'd.)

For Model 425 aircraft that have exceeded the structural retirement life prior to the availability of Cessna Service Kit SK425-48, the service kit is to be installed according to the following schedule:

A. For airplanes 425-0177 and on, and airplanes 425-0002 through 425-0176 incorporating SK425-17:

Exceeding 12, 500 hours, accomplish SK425-48 within 100 hours or 12 months after SK 425-48 was issued, whichever comes first.

Exceeding 9,300 hours but less than 12,500 hours, accomplish SK425-48 within 400 hours or 24 months after SK425-48 was issued whichever comes first.

Between 8,900 and 9,300 hours when SK425-48 was issued, accomplish within 400 hours of operation. For airplanes with less than 8,900 hours when SK425-48 was issued, accomplish at 9,300 hours.

B. For airplanes -0002 through -0176, except airplanes incorporating SK425-17:

Exceeding 12,500 hours, accomplish SK425-48 within 100 hours or 12 months after SK425-48 was issued whichever comes first.

Exceeding 10, 200 hours but less than 12,500 hours, accomplish SK425-48 within 400 hours or 24 months after SK425-48 was issued whichever comes first.

Between 9,800 and 10,200 hours when SK425-48 was issued, accomplish within 400 hours of operation. For airplanes with less than 9,800 hours when SK425-48 was issued, accomplish 10,200 hours.

Model 425 Special Conditions 23-93-CE-12, required, in part, that Cessna establish mandatory inspections of the Horizontal Tail Assembly in order to maintain continued structural integrity. Therefore, inspections are required for the horizontal stabilizer, elevators, elevator tab and tab actuator system. In order to comply with these requirements, airplanes must be inspected in accordance with inspection Item Codes A273002, A273101, A273102, B273109 and A551001 as contained in Model 425 Maintenance Manual, Part Number D2535-3-13, Revision 3 (or later revision). These inspection criteria are contained in Chapter 5, Subsection 5-10-01, and are applicable to Zones 331 and 332. All approved airplane inspection programs must include these mandatory inspections.

NOTE 4. Model 421, Serial Nos. 421-0001 and up, approved for 6840 lb. takeoff weight with C.G. range as follows when appropriate airplane flight manual, pilot's checklist, weight and balance form, and other documents are provided as specified in Cessna Service Kit SK421-12.

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C.G. Range (Landing Gear Extended) (+152.1) to (+155.5) at 6840 lb. (+155.7) at 6500 lb. (+144.3) to (+155.7) at 5500 lb.
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Straight line variation between points given

- NOTE 5. McCauley propellers with 3AF32C87 and 3AF32C504 hubs may be interchanged in any combination. This also applies to propellers with 3AF32C93 and 3AF32C505m hubs; 3AF34C92 and 3AF37C516 hubs; 3AF34C74 and 3AF37C510 hubs.
- NOTE 6. Model 425 aircraft in compliance with Cessna Drawing 5700018 are eligible for certification in The Netherlands.
- NOTE 7. Model 425 S/N 425-0001 through 425-0176 (Corsair) are eligible for the maximum weights and C.G. range applicable to S/N 425-0177 and up (Conquest I), when modified in accordance with Cessna Service Kit SK425-17, and will be renamed Conquest I.
- NOTE 8. Production Certificate No. 4 effective at Serials 402C1005 and on, 414A1208 and on, 421C1801 and on, and 425-0228 and on.

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